



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/697,601

10/29/2003

Serge Kurowski

200680-9001

9618

1131 7590 02/05/2007  
MICHAEL BEST & FRIEDRICH LLP  
Two Prudential Plaza  
180 North Stetson Avenue, Suite 2000  
CHICAGO, IL 60601

EXAMINER

KURTZ, BENJAMIN M

ART UNIT

PAPER NUMBER

1723

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/697,601	<b>Applicant(s)</b> KUROWSKI, SERGE	
	<b>Examiner</b> Benjamin Kurtz	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

1. Applicant is advised that should claims 6, 8, 11 and 14 be found allowable, claims 7, 9, 12 and 15 will be objected to under 37 CFR 1.75 as being substantial duplicates respectively thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothwell US 1 028 789 in view of Delruelle US 2 684 158. Regarding claim 21, Rothwell teaches a continuous fluid filtration device, comprising: filtration cells (1) (p. 1, line 39; Fig. 1) each having an opening (c) (Figs. 3, 4) towards its top through which they are supplied with fluid to be filtered (p. 1, lines 39-44), the cells being fitted with a filter bed (p. 1, lines 70-74) which, in the filtration position of the cells allows passage of a filtrate and retention of a filtration cake, and a bottom (a) (Figs. 3, 4); the cells being disposed in a carousel (Fig. 1) around a rotation axis (15) and each cell arranged so as to be able to pivot about a tilt axis (3) tangential to a horizontal circle having the rotation

Art Unit: 1723

axis as its centre (Figs. 1, 2); means for supporting (4, 5, 6, 7, 8) the filtration cells so that each cell can perform a revolution about the rotation axis (p. 1, lines 86-90; Figs. 2-4); means for driving (9, 9a, 9b) the filtration cells in revolution about the rotation axis (p. 1, lines 90-94); means for moving the filtration cells to cause a tilting movement thereof about their tilt axis, during their revolution about the rotation axis (p. 2, lines 35-44, Figs. 6, 7); and means for discharging the filtrate from the cells comprising at least one outlet orifice (e) at the bottom of each cell (1) (Figs. 3, 4), a central collector (15) and connection means (13) allowing flow of the filtrate between the said at least one outlet orifice and the collector (p. 1, lines 108-109; Fig. 8); said connection means for each cell comprising a conduit (13) (Figs. 3,4) which is connected at a first end to said outlet orifice and at a second end to said central collector, the outlet orifice and the flexible conduit being continuously arranged in a radial section passing through the device during said complete revolution of said cell with no area of the conduit lower than another area of this conduit situated downstream with respect to the flow of the filtrate, the conduit (13) in the filtration position of the cell extends downwards from said outlet orifice (e) along a substantially vertical axis (Figs. 3, 4) and the conduit in tilting position of the cell extends substantially horizontally (Fig. 2) from the outlet orifice (e) as far as the tilt axis.

Rothwell fails to teach the connection means comprising a flexible conduit.

Delruelle teaches a continuous fluid filtration device (Figs. 1, 2) comprising filtration cells (1) disposed in a carousel (col. 3, lines 71-75), an outlet (32) at the bottom of each cell (Fig. 5), a central collector (42, 43) and a flexible conduit (41). Delruelle teaches flexible

Art Unit: 1723

conduits, which are capable of twisting action, such that: (a) opposite ends of conduits may be securely attached to the bottom of filtration cells and to central collector, so a more complete seal may be effected to prevent leakage of liquid or air, (b) the flexibility of the conduit permit true rotation of the central collector, (c) rigid tolerances required in the manufacture of the central collector need not be applied to the remainder of the filter structure (col. 6, lines 27-43 of Delruelle). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention in view of the teachings of Delruelle to modify the conduits in the continuous fluid filtration device of Rothwell such that they are flexible.

Rothwell does not explicitly teach the flexible conduit (13) in the filtration position is angled in the direction of the collector so as to continuously have a downward slope and the flexible conduit in tilting position is angled in the direction of the collector. It is known in the art to have the collection conduit angled with a continuous downward slope as can be seen from Delruelle (fig. 2).

It would have been obvious to have had the conduit in the filtration position of the cell extend downwards from an outlet orifice along a substantially vertical axis and then, at a height lower than the tilt axis, is angled in the direction of the collector so as to continuously have a downward slope, in order to allow fluid to drain under the aid of gravity. It would also have been obvious to have had the conduit in tilting position of the cell extends substantially horizontally from the outlet orifice as far as the tilt axis, and is then angled in the direction of the collector, in order to allow fluid to drain under the aid of gravity.

In addition, these limitations on the flexible conduit do not further structurally limit. The arrangement of the flexible conduit is directed towards function rather than structure. Since the device of Rothwell and Delruelle teach the flexible conduit, which is capable of being arranged as discussed above, the structure anticipates the claimed arrangements of the flexible conduit.

3. Regarding claim 3, Rothwell and Delruelle teach a device according to claim 21 as discussed above. Rothwell and Delruelle do not explicitly disclose a device according to claim 3, characterized in that the tilt axis is supported in at least one bearing having a first outside diameter  $D1$ , in that the flexible conduit has a second outside diameter  $D2$  and in that the distance between the tilt axis and the substantially vertical axis of the flexible conduit is equal to or greater than 0 and less than or equal to  $D1+D2$ .

However, it would have been obvious to have had the tilt axis is supported in at least one bearing having a first outside diameter  $D1$ , in that the flexible conduit has a second outside diameter  $D2$  and in that the distance between the tilt axis and the substantially vertical axis of the flexible conduit is equal to or greater than 0 and less than or equal to  $D1+D2$ , because the conduit would have to be stretched in order to be in the tilting position. Stretching the conduit would be undesirable, as it would put unnecessary tension on the conduit, which would result in early failure of the conduit, such as cracks and tears.

4. Regarding claim 4, Rothwell further teaches that the substantially vertical axis is, in the said radial section, situated between the tilt axis and the rotation axis (Figs. 3, 4).

5. Regarding claim 5, Rothwell further teaches that the substantially vertical axis is, in the said radial section, situated between the tilt axis and the rotation axis (Figs. 3, 4).

6. Regarding claims 6 and 7, Rothwell further teaches that each cell is supported on a shaft (3) coaxial with the tilt axis so as to be able to pivot about this axis (Figs. 3, 4).

7. Regarding claims 8 and 9, Rothwell further teaches that each cell is supported on two shaft ends (11, 12) coaxial with each other and coaxial with the tilt axis so as to be able to pivot about this axis (Figs. 3, 4).

8. Regarding claim 10, Rothwell further teaches that each cell is supported on two shaft ends (11, 12) coaxial with each other and coaxial with the tilt axis so as to be able to pivot about this axis (Figs. 3, 4).

9. Regarding claims 11 and 12, Rothwell further teaches that it comprises a support (3a, 3b) for each flexible conduit, which turns about the rotation axis simultaneously with the filtration cells (Figs. 3, 4).

10. Regarding claim 13, Rothwell further teaches that it comprises a support (3a, 3b) for each flexible conduit, which turns about the rotation axis simultaneously with the filtration cells (Figs. 3, 4).

11. Regarding claims 14 and 15, Rothwell further teaches that the collector (15) is connected to a source of negative pressure which the flexible conduits connected to the filtration cells in the filtration position communicate to them, below their filter bed (p. 2, lines 7-12), and in that the collector is also a distributor connected to a source of pressurized gas which the flexible conduits connected to the filtration cells in the tilted

position communicate to them, in order to assist with the detachment of the filtration cake from the filter bed (p. 2, lines 15-25, 87-95).

12. Regarding claim 16, Rothwell further teaches that the collector (15) is connected to a source of negative pressure which the flexible conduits connected to the filtration cells in the filtration position communicate to them, below their filter bed (p. 2, lines 7-12), and in that the collector is also a distributor connected to a source of pressurized gas which the flexible conduits connected to the filtration cells in the tilted position communicate to them, in order to assist with the detachment of the filtration cake from the filter bed (p. 2, lines 15-25, 87-95).

13. Regarding claim 17, Rothwell further teaches that the aforementioned tilting movement means comprises a roller (10b) (Figs. 1-3) arranged on each cell so as to be able to turn freely about a pivot axis (10a), and a guide rail (30) (Figs. 1, 6) arranged fixedly at one point on the filtration device so as to receive the roller of each driven filtration cell and to guide it so as to cause the said tilting movement of the cell (p. 2, lines 35-44).

14. Regarding claim 18, Rothwell further teaches that the pivot axis (10a) of each roller (10b) is situated in a plane passing through the rotation axis of the device and perpendicular to the tilt axis of the filtration cell corresponding to the roller (Figs. 1-3).

15. Regarding claim 19, Rothwell further teaches that the roller (10b) is carried by the cell at an internal end thereof (Fig. 1-3).

16. Regarding claim 20, Rothwell further teaches that the guide rail (30) is disposed above the filtration cells so as to form a U in a plan view, comprising a central part and



two lateral branches, the filtration surface of the cell being in an approximately vertical position when the roller reaches the central part of the U (Figs. 1, 2, 6).

***Response to Arguments***

17. Applicant's arguments filed 11/13/06 have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a portion of the conduit extending up to a height lower than the tilt axis and the outlet orifice) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant has argued that the conduit of Rothwell is not continuously arranged in the same radial section of the device. The conduit is continuously arranged in the same radial section defined by the tray (1). Rothwell also teaches that no area of the conduit is lower than another area situated downstream as the conduit is depicted as being level.

Regarding applicant's arguments with regards to Delruelle on page 14 of the remarks, Rothwell already teaches no area of the conduit is lower than another area situated downstream therefore Delruelle the teaching of Delruelle was not used to add this feature in combination. Delruelle provides only the motivation to make the conduit flexible.

Although Rothwell teaches a pivoting tray that pivots differently from the tray of Delruelle it still would have been obvious to combine these references as they come

from similar art and while the pivoting mechanism differs each device will encounter similar problems.

Replacement of the conduit of Rothwell with flexible conduits would not render the apparatus unusable, as the tray would still be supported by arm (10) (fig. 3).

### ***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

Art Unit: 1723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bk 1/23/07

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700